

# Guanghao SUN

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## Education

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### Master's degree in Mechanical Engineering

*Master's degree program*

*Supervisor: Dr. Rui Hou, Prof. Jialin Hou, Prof. Yong Liu*

*Shandong Agricultural University*

*September 2022 - June 2025*

### Bachelor's degree in Automation

*Bachelor's degree program*

*Thesis: Tilling Recognition of Wheat Based on Adaptive Linear Spanning Network*

*Shandong Agricultural University*

*September 2018 - June 2022*

## Research experience

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### Center for Artificial Intelligence in Medical Imaging(CAIMI)

*Research Assistant*

*April 2022 - Present*

*Beijing, China*

- Improve diagnosis of mammographic breast cancer.
- Applied deep learning to optimize breast cancer detection system.
- Streamlined internal meme generation pipelines.

### Duke University

*Research Assistant*

*April 2022 - April 2023*

*Durham, USA*

- Collate and analyze OPTIMAN Dataset
- Construct radiomics feature engineering
- Segmentation of breast calcifications in mammography images

## Research Interests

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**Key words:** medical image analysis, computer vision, deep learning, and machine learning.

My research focuses on developing innovative machine learning and computer vision approaches for medical data analysis, aiming to create intelligent systems that enhance clinical decision-making and improve human-machine interactions in areas such as diagnostic assistance and cancer detection.

## Publications (Google Scholar)

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### Conference Papers

1. G. Sun, L. Si, J. Hou, Q. Yang, Y. Liu and R. Hou, "Performance Assessment of Malignant Masses Detection from Diagnostic Mammography" 2024 IEEE International Symposium on Biomedical Imaging (ISBI), Athens, Greece, 2024, pp. 1-4, doi: 10.1109/ISBI56570.2024.10635319

## Awards and Honors

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### National Undergraduate Electronics Design Contest

*The Second Prize*

*Thesis: Non-contact object shape and size measurement*

*September 2019*

*Shandong, China*

### The Chinese Mathematics Competitions

*The Second Prize*

*September 2021*

*Shandong, China*